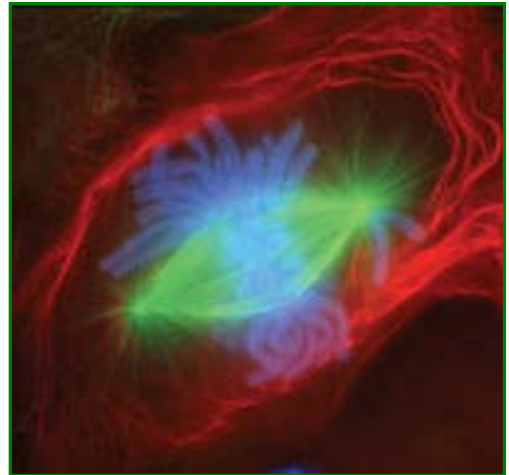


**Victor Valley College**  
**Biology 201**  
**BIOLOGY OF CELLS**

**Section # 21748**  
**Fall 2008, 5 units**

*Right: In this dividing newt lung cell the chromosomes are fluorescently-dyed blue, intermediate filaments are red, and spindle fibers are green. From web. Photo by Conly Rieder.*



### **COURSE DESCRIPTION:**

This rigorous course will provide students with a comprehensive introduction to biological principles at the cellular and molecular level. Emphasis will be placed on the scientific method, molecular biology, biochemistry, structure and function of cells, cellular reproduction, and Mendelian and molecular genetics. This course is designed for pre-professional and biology majors, but is open to all students. It is CSU & UC transferable.

### **COURSE HOURS:**

**Lecture:** Mondays & Wednesdays, 12:45 – 2:10 p.m., Room SL-11  
**Laboratory:** Mondays & Wednesdays, 2:10 – 5:20 p.m., Room SL-11

**INSTRUCTOR:** Pam MacKay

**Office hours:** Monday through Thursday, 11:30-12:20, in office SL-20

**Email:** [mackayp@vvc.edu](mailto:mackayp@vvc.edu) / [pjmackay@verizon.net](mailto:pjmackay@verizon.net)

**Phone:** (760) 245-4271, ext. 2467

**Victor Valley College Website:**

<http://www.vvc.edu/academic/biology/MacKayP2/pamshome.htm>

### **MATERIALS NEEDED:**

**Text:** *Biology*, 8th edition, Campbell & Reece, Benjamin Cummings Publishing

**Lab manual:** *Investigating Biology Lab Manual*, 5<sup>th</sup> edition, Morgan & Carter

**Required items:** Scientific calculator, Scantrons (need 14 small 15 or 20-question type, and 8 full-page with 100 questions)

**Optional items:** Sharpie marker, colored pencils

### **FALL SEMESTER INFORMATION:**

August 25 – Instruction begins

September 1 – Labor Day holiday – No VVC classes

November 4 – Last day to drop this course and receive a 'W'

November 10 – Veteran's Day Holiday – No VVC classes

November 27-30 – Thanksgiving Holiday – No VVC classes

December 13 – Fall semester ends

## COURSE OBJECTIVES: The student will be able to:

1. Describe the processes of the scientific method and report scientific information
2. Describe properties of matter and biological molecules and apply concepts to cell biology.
3. Discuss cell structure and function and demonstrate proficiency in the use of a microscope and slide preparation.
4. Explain the biochemical processes of photosynthesis and cellular respiration
5. Explain the steps of mitosis and meiosis and their cellular controls
6. Discuss concepts of Mendelian and molecular genetics, solve various types of Mendelian genetics problems, and analyze pedigrees.
7. Explain protocols of several current DNA techniques and their applications, including protein electrophoresis, RFLP, transformation, and other protocols, and practice these in the laboratory

## GRADING:

<i>Points can be earned by:</i>	<i>Point values:</i>
Eight lecture exams @ 150 points each. Covers reading and lecture material. Essays, multiple choice, matching, T/F, fill-ins, and lab practical questions.	1200
Best 12 individual laboratory quizzes @ 15 points each	180
18 Lab write-ups @ 15 points each	270
Group lecture & laboratory quizzes & other small projects (including journal article reading and interpretations) with various point values. All members of group get same score. These may be given at any time during class hours.	200
Special group lab project and presentation	150
<b>TOTAL POINTS POSSIBLE</b>	<b>2000</b>

<i>Grades will be assigned by point values/percentages:</i>	<i>Grade:</i>
90.0 to 100% (1800-2000 points)	A
80.0 to 89.9% (1600-1799 points)	B
70.0 to 79.9% (1400-1599 points)	C
60.0 to 69.9% (1200-1399 points)	D
Below 60% (below 1200 points)	F

## NOTE ABOUT EXTRA CREDIT:

It is a general policy of the biology department NOT to give out-of-classroom extra credit points and to limit extra credit to no more than 3% of the total points available during the entire semester. The extra credit to be offered in Biology 201 is available to everyone during class hours only for participation in JEOPARDY games designed to help you study for exams. The total each person can earn for the semester shall not exceed 64 points, just slightly exceeding that 3% maximum. Since there are 8 jeopardy games available, the winning team will be offered 8 points, second place will get 5 points, and all other participants will receive 3 extra credit points. Participation is not mandatory, but it is advised.

## POLICIES:

<b>Syllabus</b>	You must read the entire syllabus by the next class meeting. Continued enrollment constitutes legal acceptance of policies and guidelines herein.
<b>Prerequisites</b>	Prerequisites will be enforced! Must have taken Chemistry 201 or the college equivalent or be concurrently enrolled. High school courses, including AP courses, will not suffice. NO EXCEPTIONS!
<b>Attendance</b>	<p>+<i>Title 5 Section 5502 of the California Code of Regulations</i> states that attendance is not to be used as a basis for performance or proficiency. Class participation, however, is a valid criterion for grading. It is in your best interest to attend both lab and lecture of this course, since if you are not present, you will miss lecture information that may not be in the text on which you will be tested.</p> <p>+Points that are available from participation in in-class group questions and activities cannot be made up.</p> <p>+ You may not make up the lab quizzes, although you will be graded only on the best 12 scores (there will be 14 lab quizzes during the semester; only the best 12 will count and the other lowest scores will be dropped).</p>
<b>Grading and the state education code</b>	<p>+Reference <i>Title 5 Section 5502 of the California Code of Regulations (A)</i> for Grading Policy. This course provides for measurement of student performance in terms of stated course objectives and culminates in a formal, permanently recorded grade based upon uniform standards in accordance with section 55758 of this Division. The grade is based on demonstrated proficiency in the subject matter and the ability to demonstrate that proficiency, at least in part, by means of written expression that includes essays, problem solving exercises, and skills demonstration by students.</p> <p>+<i>In other words, according to the law, I will test you with essays, problems, and skill demonstrations to determine your proficiency in the subject matter.</i></p> <p>+I use the very same criteria to determine the grade for each student (see grading criteria below). See below for specific information on how grades are determined for this course.</p> <p>+The grade you receive becomes part of your permanent record.</p>
<b>Make-ups</b>	<p>+Lecture exams (except for final exam) can be made up during the last week of classes before finals week, by appointment only.</p> <p>+A maximum of two make-ups is allowed.</p> <p>+You may not make up the in-class group quiz questions, labs, or group activities.</p>
<b>Adding, dropping, enrollment</b>	<p>+It is up to the student to fill out and turn in signed add or withdrawal forms, and to pay fees by the deadline.</p> <p>+It is the official policy of VVC that the instructor may administratively drop students who have missed more than one hour for each unit of credit (for this class, that's two full class sessions – lecture and lab).</p> <p>+Be advised that the instructor may also drop students for cheating, for disruptive or unsafe behavior, for non-compliance with policies described in this syllabus, or for any behavior that poses a potential or actual threat to other students or the instructor.</p>

Visitors	+You must be enrolled in this course to participate in any of the course lectures, labs, or activities, or to be in the Biology 201 classroom. +Visitors and children are <b>not</b> welcome in the Biology 201 classroom, EVER. Please tell your friends and family to wait for you in the science building foyer.
Conduct	+Show respect for your colleagues by <b>minimizing audience noise during lectures and arriving on time.</b> +If you must carry on private conversations with your neighbor, do this during the breaks—not during lecture time. +However, please feel free to ask questions during lecture and lab, and we may have discussions (with all included) about the lecture material. +I expect you to exhibit courtesy to others in the class at all times. +It is imperative that you follow all laboratory safety rules; these will be strictly enforced.
Cell phones, pagers	+These must be <b>turned off AND stashed</b> in closed book bag or purse during lecture and lab; instructor may drop you from the course for consistent or repeated cell phone interruptions. +If you wish to use your cell phone during the break, you must leave the classroom; you may never use your cell phone in the classroom. +If your stashed cell phone or pager audibly rings during an exam, you will have 10 points deducted from your exam score. +If you have a cell phone or other electronic communication device out (this means on your desk, in your pocket, wearing any kind of earphone, or in any way on your person) during an exam, you will be assumed to be cheating and receive a score of '0' for that exam.
Personal laptops and school computers	+You may NOT have your laptop out on the desk or on your lap during lecture in this classroom, not even for taking notes. +In certain instances, laptops may be used during laboratory (get instructor approval first) for retrieving and processing Biology 201 information and data only. +You are not permitted to use your laptop or other electronic device to play games, send email, or for any other purpose in the Biology 201 classroom during any class hours or breaks. +We have classroom PCs available when you need to look up information pertinent to the course. These computers are never to be used for games, email, or purposes other than needed for the Biology 201 course.
Tape recorders	+Tape recorders are permitted during lectures only. +For hygienic reasons, they are not to be used in the laboratory. +Keep track of your own recorder! The instructor or the college is not responsible for lost, stolen, or damaged recorders.
Other electronic devices	+Use of hand-held electronic video games, IPODs, or other electronic devices is not permitted in the Biology 201 classroom at any time. +Keep them off and stashed in your bookbag.
Cheating policy	<i>Cheating in this course will not be tolerated.</i> +If you are <b>caught</b> cheating, you will be dropped from the course.

<p>Cheating policy, continued...</p>	<p>+If, due to your behavior during a quiz or exam, you are <b>suspected</b> of cheating, you will be asked to retake the same or a similar quiz or exam; if you choose not to retake the exam, you will receive a score of '0' for that exam.</p> <p>+If you are <b>suspected</b> a second time, you will get a score of '0' for that quiz or exam with no re-take allowed.</p> <p>+The third time you are <b>suspected</b> of cheating, you will be dropped from this course.</p>
<p>Special rules apply for exams</p>	<p>+Instructor will assign seating for each exam and may change your seat assignment during an exam</p> <p>+You may not leave the classroom during an exam; you must turn in your exam before leaving (this means you are finished with your exam). If you have a medical condition in which you cannot stay in class for the length of an exam (two hours maximum), you must bring a note from your doctor that indicates this. If you are too sick to sit through the exam, it is better to stay home—don't spread your germs! You can take the exam during makeup week.</p> <p>+All bookbags, books, notes, and other items (except pencils) must be left on the side counters during exams. You may not access your personal belongings during an exam.</p> <p>+Hats with brims are to be removed or worn backwards during exams. Instructor may check baggy sleeves.</p> <p>+You are to keep your hands above desktop level during all exams.</p> <p>+You may not talk audibly (whether to yourself or to others) during any exam except to communicate with the instructor.</p> <p>+All electronic devices must be left on the side counters during exams. You may not have <b>any</b> type of electronic device in your possession, including blue tooth, earphone, cell phone, IPOD, laptop, or any other electronic device. If you are caught with <b>any</b> of these items on your person during an exam, you will be assumed to be cheating, and the cheating rules above will apply.</p> <p>+If your stashed cell phone or pager audibly rings during an exam, you will have 10 points deducted from your exam score.</p>
<p>Information about JEOPARDY games</p>	<p>+Extra credit points (not to exceed 3% of total points available for semester—these are the <b>ONLY</b> extra credit points available for this course) can be earned by participation in Biology 201 JEOPARDY games. Participation is not mandatory.</p> <p>+JEOPARDY is offered during the last hour of each class session preceding an exam date; there are 8 games in all. They are designed to reinforce course information to help you study for exams.</p> <p>+Students will pick their own teams prior to the game date; there should be only three teams in all. Students may not be excluded from a team by other team members. Also, teams should be more or less even. Team composition can change during the semester (this is encouraged).</p>